

Application No. 09/589,299  
Filed: Jun e7, 2000  
TC Art Unit: 2629  
Confirmation No.: 9186

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THE CLAIMS

1.-12. (Cancelled)

13. (Previously Presented) A compact display device for transmitting an image to a user's eye, the display device comprising:

a head-mountable support fixture comprising an elongated member having a first end and a second end;

a projection system including a display operative to provide an image, the support fixture attached at the first end to the projection system; and

an eyepiece assembly attached to the second end of the support fixture, wherein the eyepiece assembly is disposed within a hollow, transparent, spherical curved optical and structural housing;

wherein the support fixture maintains the projection system and the eyepiece assembly in alignment along an optical path through free space between the projection system and the eyepiece assembly, with the projection system disposed to transmit the image on the optical path and the eyepiece assembly disposed to receive the image from the projection system and to direct the image to the user's eye.

14. (Original) The device of claim 13, wherein the eyepiece assembly further comprises a polarization beam-splitter coating, a quarterwave plate, and a focusing mirror disposed with the curved housing arranged so that polarized light from the projection system passes the beam-splitter coating and the quarterwave plate

Application No. 09/589,299

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TC Art Unit: 2629

Confirmation No.: 9186

and is reflected from the focusing mirror to pass in the opposite direction through the quarterwave plate and is reflected from the beam-splitter coating toward the user's eye.

15. (Original) The device of claim 14, wherein a further lens is disposed within the curved housing.

16. (Previously Presented) The device of claim 13, wherein the eyepiece assembly further comprises a lens having an outer surface forming a part of the curved housing and an inner surface, the curvatures of the outer surface and the inner surface selected to provide a desired degree of magnification or aberration correction of light on the optical path.

17. (Original) The device of claim 13, wherein the curved housing includes an internal surface having a curvature selected to form a lens.

18. (Original) The device of claim 17, wherein the lens is a meniscus lens.

19. (Original) The device of claim 13, wherein the curved housing transmits ambient light.

20. (Original) The device of claim 13, wherein the curved housing is coated with a scratch resistant coating or an antireflection coating.

21.-27. (Cancelled)

Application No. 09/589,299

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Confirmation No.: 9186

28. (Currently Amended) The device of ~~claims 1, 13, or 21~~ claim 13, further comprising a housing, the projection system disposed within the housing, circuits and wiring in electrical communication with the projection system disposed within the housing, and the support fixture attached to the housing.

29. (Original) The device of claim 28, further comprising a mounting device configured to mount the housing to spectacle frames or a headband.

30. (Original) The device of claim 28, further including a microphone supported by the housing.

31. (Original) The device of claim 30, wherein the microphone is mounted on a boom.

32. (Original) The device of claim 28, further including an earpiece supported by the housing and operative to transmit audio output signals.

33. (Original) The device of claim 28, further comprising a boom attached to a headband, the housing attached to the boom.

34. (Original) The device of claim 33, further comprising a microphone supported by the headband.

Application No. 09/589,299  
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TC Art Unit: 2629  
Confirmation No.: 9186

35. (Original) The device of claim 33, further comprising an earpiece supported by the headband and operative to transmit audio output signals.

36.-38. (Cancelled)

39. (Previously Presented) A cellular telephone in communication with the display device of claim 13.

40. (Previously Presented) A computer in communication with the display device of claim 13.

41. (Previously Presented) A personal digital assistant in communication with the display device of claim 13.

42.-44. (Cancelled)